

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method of determining, in a predefined target position, the sound pressure ( $\Delta p$ ) resulting from sound emitted from a surface element ( $\Delta S$ ) of a sound emitting surface (S), the method comprising
  - measuring, using a three-dimensional array of a plurality of microphones arranged in a first predefined measuring position relative to the surface element ( $\Delta S$ ), a first three-dimensional distribution of sound pressure,
  - calculating, based on the first three-dimensional distribution of sound pressure, the air-particle velocity ( $u_n$ ) on the surface element ( $\Delta S$ ) and perpendicular to the surface element ( $\Delta S$ ), resulting from the sound emitted from the surface (S),
  - arranging a sound source capable of emitting a volume velocity ( $Q_v$ ) in the target position,
  - causing the sound source to emit the volume velocity ( $Q_v$ ),
  - measuring, using a three-dimensional array of a plurality of microphones arranged in a second predefined measuring position relative to the surface element ( $\Delta S$ ) and with the volume velocity ( $Q_v$ ) emitted from the sound source in the target position creating a dominating sound, a second three-dimensional distribution of sound pressure,
  - calculating, based on the second three-dimensional distribution of sound pressure, the sound pressure ( $p_v$ ) at the surface element ( $\Delta S$ ) resulting from the volume velocity ( $Q_v$ ) emitted from the sound source in the target position,

- determining the transfer function  $H = p_v/Q_v$  as the ratio of the sound pressure ( $p_v$ ) at the surface element ( $\Delta S$ ) to the volume velocity ( $Q_v$ ) emitted from the sound source in the target position, and
- determining the sound pressure ( $\Delta p$ ) in the target position as  $\Delta p = H \cdot (u_n \cdot \Delta S)$ .

2. (Original) A method of determining, in a predefined target position, the sound pressure ( $\Delta p$ ) resulting from sound emitted from a surface element ( $\Delta S$ ) of a sound emitting surface (S), the method comprising

- measuring, using a three-dimensional array of a plurality of microphones arranged in a first predefined measuring position relative to the surface element ( $\Delta S$ ), a first three-dimensional distribution of sound pressure,
- calculating, based on the first three-dimensional distribution of sound pressure, the air-particle velocity ( $u_n$ ) perpendicular to the surface element ( $\Delta S$ ) and on the surface element ( $\Delta S$ ), and the sound pressure ( $p$ ) on the surface element ( $\Delta S$ ), resulting from the sound emitted from the surface (S),
- arranging a sound source capable of emitting a volume velocity ( $Q_v$ ) in the target position,
- causing the sound source to emit the volume velocity ( $Q_v$ ),
- measuring, using a three-dimensional array of a plurality of microphones arranged in a second predefined measuring position relative to the surface element ( $\Delta S$ ) and with the volume velocity ( $Q_v$ ) emitted from the sound source in the target position creating a dominating sound, a second three-dimensional distribution of sound pressure,

- calculating, based on the second three-dimensional distribution of sound pressure, the sound pressure ( $p_v$ ) at the surface element ( $\Delta S$ ) and the component of the particle velocity ( $u_{v,n}$ ) perpendicular to the surface element ( $\Delta S$ ) resulting from the volume velocity ( $Q_v$ ) emitted from the sound source in the target position, and
- determining the sound pressure ( $\Delta p$ ) in the target position in accordance with the formula

$$\Delta p = \iint_{\Delta S} \left[ \frac{p_v}{Q_v} u_n - \frac{u_{v,n}}{Q_v} p \right] dS .$$

3. (Currently Amended) A method according to ~~any one of claims 1-2~~ claim 1 ~~e-h-a-r-a-c-t-e-r-i-z-e-d-i-n-t-h-a-t-w-h-e-r-e-i-n~~ the target position is a listening position suitable for being occupied by a human being.

4. (Currently Amended) A method according to claim 1 ~~e-h-a-r-a-c-t-e-r-i-z-e-d-i-n-t-h-a-t-w-h-e-r-e-i-n~~ the air-particle velocity ( $u_n$ ) perpendicular to the surface element ( $\Delta S$ ) resulting from the sound emitted from the surface (S) is calculated, based on the first three-dimensional distribution of sound pressure, using a Near-Field Acoustical Holography (NAH) method, and that

the sound pressure ( $p_v$ ) at the surface element ( $\Delta S$ ) resulting from the volume velocity ( $Q_v$ ) emitted from the sound source in the target position is calculated, based on the second three-dimensional distribution of sound pressure, using a Near-Field Acoustical Holography (NAH) method.

5. (Currently Amended) A method according to claim 2 ~~e-h-a-r-a-c-t-e-r-i-z-e-d-i-n-t-h-a-t-w-h-e-r-e-i-n~~ the air-particle velocity ( $u_n$ ) perpendicular to the surface element ( $\Delta S$ ) and the sound pressure ( $p$ ) resulting from the sound emitted from the surface (S) are

calculated, based on the first three-dimensional distribution of sound pressure, using a Near-Field Acoustical Holography (NAH) method, and that

the sound pressure ( $p_v$ ) at the surface element ( $\Delta S$ ) and the air-particle velocity ( $u_{v,n}$ ) perpendicular to the surface element  $\Delta S$  resulting from the volume velocity ( $Q_v$ ) emitted from the sound source in the target position are calculated, based on the second three-dimensional distribution of sound pressure, using a Near-Field Acoustical Holography (NAH) method.

6. (Currently Amended) A method according to ~~any one of claims 1-5~~ claim 1 ~~e-h-a-r-a-c-t-e-r-i-z-e-d—w h e r e i n~~ by using as the volume velocity sound source a simulator simulating acoustic properties of at least a head of a human being, the simulator having a simulated ear with an orifice and a sound source for outputting sound signals through the orifice of the simulated ear.

7. (Currently Amended) A method according to claim 6 ~~e-h-a-r-a-c-t-e-r-i-z-e-d—w h e r e i n~~ ~~in that~~ wherein the simulator simulates the acoustic properties of the head and a torso of a human being.

8. (Currently Amended) A method according to ~~any one of claims 1-7~~ claim 1 ~~e-h-a-r-a-c-t-e-r-i-z-e-d—w h e r e i n~~ by using, as the three-dimensional array of a plurality of microphones, an array having two parallel layers of microphones, where each layer comprises a plurality of microphones arranged in a two-dimensional grid.

9. (Currently Amended) A method according to ~~any one of claims 1-7~~ claim 1 ~~e-h-a-r-a-c-t-e-r-i-z-e-d—w h e r e i n~~ by using, as the three-dimensional array of a plurality of microphones, an array comprising a combination of pressure microphones and particle velocity sensors.

10. (Currently Amended) A method according to claim 9 ~~e-h-a-r-a-c-t-e-r-i-z-e-d-w-h-e-r-e-i-n~~ by using, as the three-dimensional array of a plurality of microphones and velocity sensors, a planar array of combination sensors, each being able to measure both the sound pressure and the particle velocity component perpendicular to the array plane.

11. (Currently Amended) A method according to claim 2 ~~e-h-a-r-a-c-t-e-r-i-z-e-d-i-n~~ that the sound pressure ( $\Delta p$ ) in the target position is determined as an approximation in accordance with the formula

$$\Delta p = \left[ \frac{p_v}{Q_v} u_n - \frac{u_{v,n}}{Q_v} p \right] \Delta S.$$